

E7.3 109.43  
CR-133619

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
~~SOIL AND WATER CONSERVATION RESEARCH DIVISION~~  
~~RIO GRANDE SOIL AND WATER RESEARCH CENTER~~

P. O. BOX 267

WESLACO, TEXAS 78596

September 7, 1973

"Made available under NASA sponsorship  
in the interest of early and wide dis-  
semination of Earth Resources Survey  
Program information and without liability  
for any use made thereof."

Subject: Progress Report No. 3 (August, 1973) for Investigation No. 356  
(Contract T-4105B).

To: NASA, Lyndon B. Johnson Spacecraft Center  
Attn: Ryborn R. Kirby

The monthly progress report for August is as follows:

We received the SL-2 EREP MSS images of channels 2, 7, and 11 on  
August 9 and requested the CCT of Starr County on August 10.

On August 13 the EREP S 190A photoproducts (frames 46 through 54)  
were received from SL-2, revolution 233, May 30, 1973. Comments on the  
various film types are as follows:

Camera No. 1, EK 2424, 0.7 - 0.8 nm -- The images for water and land  
differ widely; water has a light tone and bare soil has the dark-  
est tone with vegetation in between.

Camera No. 2, EK 2424, 0.8 - 0.9 nm -- The images are very similar to  
those for camera No. 1. The contrast among water, bare soil and  
vegetation gives visible appearance of being greater.

Camera No. 5, Panatomic X, SO 22, 0.6 - 0.7 nm -- The images are very  
clear and the contrast among water, bare soil, and vegetation is  
about the same as for camera No. 2. The images are "sharper,"  
however. Towns and cities stand out very well. Cultural prac-  
tices in rangeland are rather marked.

Camera No. 6, Panatomic X, SO 22, 0.5 - 0.6 nm -- Images are less  
sharp than from camera No. 5 but seem to have more levels of  
optical density in the bare soils than the other films. Is good  
film for looking at water bodies. Roads, canals, and reservoirs  
are well distinguished from surroundings.

Camera No. 4, Aerial color, SO 356, 0.4 - 0.7 nm -- Images are very  
sharp considering the effect haze has on this film type. Soil  
color differences are very marked. Bare soil, vegetation, and  
water contrast well. However, tone differences within vegeta-  
tion are almost nonexistent.

(E73-10943) [SL-2 MULTISPECTRAL BAND  
CAMERA PHOTOGRAPHY] Progress Report,  
Aug. 1973 (Agricultural Research Service)  
2 p HC \$3.00 CSCL 14E

N73-30285

Unclas  
G3/13 00943

Camera No. 3, color IR, SO 172, 0.5 - 0.88 nm -- Not as sharp as conventional color for landmark differentiation and location. Tone differences among soils are very subtle. Contrast among bare soil, vegetation, and water is also small. There are some red tone variations that should register differences in vegetation density.

On August 10 we were informed by the PLMO that Site 32 would be covered by the Astronauts on Aug. 12. Aug. 12 was quite cloudy; on Aug. 13 Mr. Kirby informed us the first land the Astronauts were able to see was Padre Island but that the satellite had passed right over our prime site, Cameron County.

On August 24 we mailed a Data Processing Requirements Form for Mission 238, site 32 (flown 5/29/73) to the Aircraft Application Branch. The request would have been mailed earlier had we understood clearly the procedure for ordering EREP aircraft support data. Photomosaics of the flight lines covered on Mission 238 are partially completed. These will be studied for vegetation indicators of degree and extent of salinity and for selecting areas that are spectrally fairly homogeneous and large enough to distinguish (40 acres) in satellite CCT data. The flight line photomosaics will also be compared with generalized soil maps of Cameron and Starr Counties that indicate where saline soil phases occur. These inputs will guide the verification soil sampling (of ground conditions) and should assist in obtaining sites that are spectrally representative of county salinity conditions.

*Craig Wiegand*  
 Craig L. Wiegand  
 Principal Investigator

Distribution:

NASA-Houston, R. R. Kirby TF6  
 NASA-Houston, V. M. Dauphin TF  
 National Aeronautics and Space Administration  
 Scientific and Technical Information Facility  
 Washington, DC